I claim:

1. A vane cell pump for delivering fluids, comprising a rotor, a cam ring and a plurality of vanes which are pre-tensioned by means of spring elements, the spring elements being an integral part of the rotor, wherein the rotor is made of plastic and the spring elements are captively molded into the rotor.

2. The vane cell pump according to Claim 1, wherein the spring elements are implemented as spring tongues or as spiral springs.

3. The vane cell pump according to Claim 1, wherein the spring elements are disposed on a ring.

4. The vane cell pump according to Claim 1, wherein the spring elements are made of spring steel or plastic.

5. The vane cell pump according to Claim 1, wherein the vanes and/or the cam ring and/or a side plate and/or a pump casing are made of plastic.

6. The vane cell pump according to Claim 2, wherein a duroplast is used as the plastic material.

7. The vane cell pump according to Claim 1, wherein the vane cell pump is used as a pre-supply pump for a high-pressure pump of a common rail injection system.

8. A vane cell pump for delivering fluids, comprising

- a plastic rotor having integrated spring elements captively molded into the rotor,
- a cam ring, and
- a plurality of vanes whereby the vanes are pre-tensioned by said spring elements.

9. The vane cell pump according to Claim 8, wherein the spring elements are implemented as spring tongues or as spiral springs.

10. The vane cell pump according to Claim 8, wherein the spring elements are disposed on a ring.

11. The vane cell pump according to Claim 8, wherein the spring elements are made of spring steel or plastic.

12. The vane cell pump according to Claim 8, wherein the vanes and/or the cam ring and/or a side plate and/or a pump casing are made of plastic.

13. The vane cell pump according to Claim 9, wherein a duroplast is used as the plastic material.

14. The vane cell pump according to Claim 8, wherein the vane cell pump is used as a pre-supply pump for a high-pressure pump of a common rail injection system.